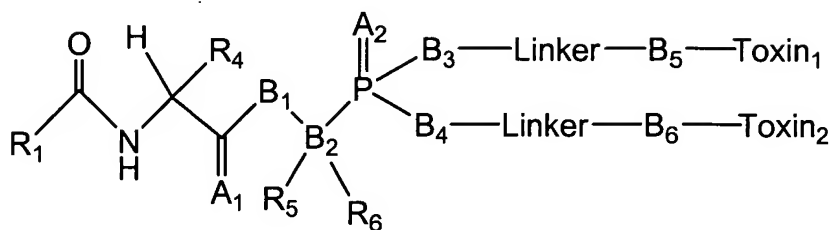


WHAT IS CLAIMED:

1. A compound having the structure:



wherein:

R_1 is hydrogen or CH_3 ;

R_4 is selected from the group consisting of a substituted or unsubstituted aryl group, a substituted or unsubstituted, saturated or unsaturated $C_1 - C_6$ alkyl group and $-CH_2CH_2XCH_3$, wherein X is selected from the group consisting of oxygen, sulfur and CH_2 ;

R_5 and R_6 are independently selected from the group consisting of hydrogen, a substituted or unsubstituted $C_5 - C_{14}$ aryl group and a substituted or unsubstituted, saturated or unsaturated $C_1 - C_6$ alkyl group;

$=A_1$ is either absent, in which case the carbon to which it was attached becomes a CH_2 group, or A_1 is selected from the group consisting of oxygen, sulfur, NH, NOH, NR_8 , and CR_9R_{10} , wherein R_8 , R_9 and R_{10} are independently selected from the group consisting of hydrogen and $C_1 - C_6$ alkyl;

$=A_2$ is either absent, in which case the carbon to which it was attached becomes a CH_2 group, or A_2 is selected from the group consisting of oxygen, sulfur, NH, NOH and NR_{11} wherein R_{11} is selected from the group consisting of hydrogen and $C_1 - C_6$ alkyl;

B₁ is either absent or is selected from the group consisting of oxygen, sulfur, NR₁₂ and CR₁₃R₁₄, wherein R₁₂, R₁₃ and R₁₄ are independently selected from the group consisting of hydrogen and a substituted or unsubstituted saturated or unsaturated alkyl;

B₂ is selected from the group consisting of carbon, oxygen and nitrogen, wherein, when B₂ is oxygen, R₅ and R₆ are absent and when B₂ is nitrogen, one of R₅ or R₆ is absent;

B₁ may be joined through R₁₂, R₁₃ or R₁₄ to R₅ or R₆ to form a saturated or unsaturated, substituted or unsubstituted ring which may contain 0 – 3 nitrogen atoms and/or 0 – 1 oxygen or sulfur atoms;

B₃ and B₄ are independently absent or selected from the group consisting of oxygen, sulfur, NH, CH₂, NR₁₇, CHR₁₈, CR₂₁R₂₂ and, when either linker₁-B₅-Toxin₁ or linker₂-B₆-Toxin₂ is absent, OR₁₅, SR₁₆, NR₁₉R₂₀ and CR₂₃R₂₄R₂₅, wherein R₁₅ – R₂₅ are independently selected from the group consisting of hydrogen, substituted or unsubstituted, saturated or unsaturated alkyl and substituted or unsubstituted aryl;

B₃ or B₄ may be joined through one of R₁₅ – R₂₅ to B₁, R₅ or R₆ to form a saturated or unsaturated, substituted or unsubstituted ring which contains one phosphorus atom and which may contain 0 – 3 nitrogen atoms and/or 0 – 1 oxygen or sulfur atoms;

B₅ and B₆ are independently absent or selected from the group consisting of oxygen, sulfur, OC(=O), SC(=S), OC(=O)NH, SC(=S)NH, OC(=S)NH, N(R₂₆) and C(R₂₇)(R₂₈), wherein R₂₆, R₂₇ and R₂₈ are independently selected from the group consisting of hydrogen and a substituted or unsubstituted, saturated or unsaturated alkyl;

Linker₁ and Linker₂ are independently absent or present and if present are traceless; and,

one of Toxin₁ or Toxin₂ may be absent.

2. The compound of claim 1, wherein:

R_1 is hydrogen; and,

R_4 is $\text{CH}_2\text{CH}_2\text{XCH}_3$, wherein X is selected from the group consisting of CH_2 , sulfur and oxygen.

3. The compound of claim 2, wherein X is sulfur.

4. The compound of claim 3, wherein A_1 and A_2 are both oxygen.

5. The compound of claim 4, wherein Linker₁-B₅-Toxin₁ is absent.

6. The compound of claim 5, wherein B₁ is absent.

7. The compound of claim 5, wherein B₂ is carbon.

8. The compound of claim 5, wherein B₂ is nitrogen.

9. The compound of claim 5, wherein B₃ is selected from the group consisting of OH, OCH₃, OCH₂CH₃ and OC₆H₅.

10. The compound of claim 5, wherein Linker₂ is selected from the group consisting of

substituted or unsubstituted allyl;

substituted or unsubstituted benzyl,

$\text{C}_6\text{H}_4\text{CH}_2\text{X}_1\text{C}(=\text{X}_2)$, wherein X_1 and X_2 are independently selected from the

group consisting of oxygen, sulfur and N(R₂₉), wherein R₂₉ is hydrogen or C₁ – C₆

alkyl; and,

$(\text{CH}_2)_n\text{N}(\text{R})\text{C}(=\text{O})$, wherein n is 2 or 3 and R is hydrogen or C₁ – C₆ alkyl.

11. The compound of claim 10, wherein B₆ is absent.

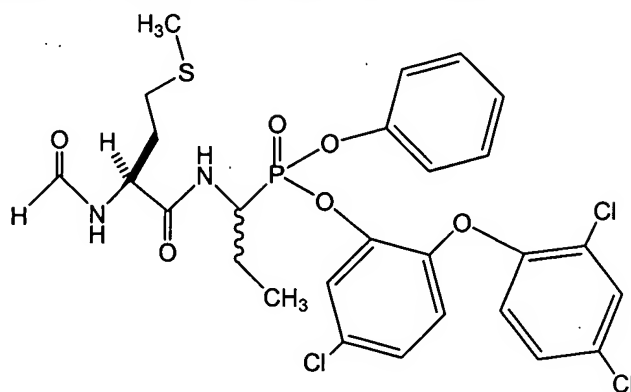
12. The compound of claim 1, wherein Toxin₁ and Toxin₂ are independently selected from the group consisting of aminoglycosides, mitomycin, CC-1065, ducarmycin, cyclopropyl indole, cyclopropyl benzoindole analogs, anthracyclins, vinca alkaloids, mitomycins, bleomycins, penicillins, cephalosporins, oxacillins, carbopenems, tetracyclins, chloramphenicols, macrolides, cycloserines, fluoroquinolones (including, but not limited to, ciprofloxacin and norfloxacin), glycopeptides, aminoglycosides, peptide antibiotics, oxazolidinones, quinolones, sulfonamides, cytotoxic nucleosides, pteridine family, nitrogen mustards, polyhalogenated biaryl ethers, diynenes, podophillotoxins, taxoids, doxorubicin, carminomycin, daunorubicin, aminopterin, methotrexate, methopterin, dichloromethotrexate, mitomycin C, porfiromycin, 6-mercaptopurine, cytosine arabinoside, podophillotoxin, etoposide, etoposide phosphate, melphalan, vindesine, vinblastine, vincristine, leurosine, leurosidine, bis-(2-chloroethyl)amine, trichlorcarban, trichlorocarbanilide, triclosan, tribromosalicylanilide, sulphamethoxazole, chloramphenicol, cycloserine, trimethoprim, chlorhexidine, hexachlorophene, fentichlor, 5-chloro-2-(2,4-dichlorophenoxy)phenol, 4-chloro-2-(2,4-dichlorophenoxy)phenol, 3-chloro-2-(2,4-dichlorophenoxy)phenol, 6-chloro-2-(2,4-dichlorophenoxy)phenol, 5-chloro-2-(3,4-dichlorophenoxy)phenol, 5-chloro-2-(2,5-dichlorophenoxy)phenol, 5-chloro-2-(3,5-dichlorophenoxy)phenol, 2,2'-dihydroxy biphenyl ether, halogenated 2-hydroxybenzophenones, 2-mercaptopyridine-N-oxide, combretastatin, camptothecin, apoptolidene, cisplatin, epothilone, halichondrin, hemiasterlin, methioprim, thapsigargin, chloroquine, 4-hydroxycyclophosphamide, etoposide, colchicine, melphalan, quercetin, genistein, erbstatin, N-(4-aminobutyl)-5-chloro-2-naphthalen-sulfonamide, pyridinyloxazol-2-one, isoquinolyloxazolone-2-one, verapamil, quinine, quinidine, and chloroquine.

13. The compound of claim 11, wherein Toxin₂ is selected from the group consisting of aminoglycosides, mitomycin, CC-1065, ducarmycin, cyclopropyl indole, cyclopropyl benzoindole analogs, anthracyclins, vinca alkaloids, mitomycins, bleomycins, penicillins,

cephalosporins, oxacillins, carbopenems, tetracyclins, chloramphenicols, macrolides, cycloserines, fluoroquinolones (including, but not limited to, ciprofloxacin and norfloxacin), glycopeptides, aminoglycosides, peptide antibiotics, oxazolidinones, quinolones, sulfonamides, cytotoxic nucleosides, pteridine family, nitrogen mustards, polyhalogenated biaryl ethers, diynes, podophillotoxins, taxoids, doxorubicin, carminomycin, daunorubicin, aminopterin, methotrexate, methopterin, dichloromethotrexate, mitomycin C, porfiromycin, 6-mercaptopurine, cytosine arabinoside, podophillotoxin, etoposide, etoposide phosphate, melphalan, vindesine, vinblastine, vincristine, leurosine, leurosine, bis-(2-chloroethyl)amine, trichlorcarban, trichlorocarbanilide, triclosan, tribromosalicylanilide, sulphamethoxazole, chloramphenicol, cycloserine, trimethoprim, chlorhexidine, hexachlorophene, fentichlor, 5-chloro-2-(2,4-dichlorophenoxy)phenol, 4-chloro-2-(2,4-dichlorophenoxy)phenol, 3-chloro-2-(2,4-dichlorophenoxy)phenol, 6-chloro-2-(2,4-dichlorophenoxy)phenol, 5-chloro-2-(3,4-dichlorophenoxy)phenol, 5-chloro-2-(2,5-dichlorophenoxy)phenol, 5-chloro-2-(3,5-dichlorophenoxy)phenol, 2,2'-dihydroxy biphenyl ether, halogenated 2-hydroxybenzophenones, 2-mercaptopyridine-N-oxide, combretastatin, camptothecin, apoptolidene, cisplatin, epothilone, halichondrin, hemiasterlin, methioprim, thapsigargin, chloroquine, 4-hydroxycyclophosphamide, etoposide, colchicine, melphalan, quercetin, genistein, erastatin, N-(4-aminobutyl)-5-chloro-2-naphthalen-sulfonamide, pyridinyloxazol-2-one, isoquinolyloxazolone-2-one, verapamil, quinine, quinidine, and chloroquine.

14. The compound of claim 13, wherein Toxin₂ is a quinolone.
15. The compound of claim 13, wherein Toxin₂ is selected from the group consisting of triclosan, cyclopropylindole, cyclopropylbenzoindole and derivatives thereof.
16. The compound of claim 5, wherein B₁ is joined to R₅ or R₆ to form a ring.

17. A compound of claim 1, having the structure:



18. A composition comprising:

a compound of claim 1; and,

a pharmaceutically acceptable carrier.

19. A method for the treatment of a disease caused by a microorganism expressing a peptide deformylase enzyme, comprising administering an effective amount of a compound of claim 1 to a patient in need thereof. ✓